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Edinburgh
Medicine
of
Seventy
Years
Ego

Messrs. A. & C. BLACK
WHO WERE THE
PUBLISHERS OF THE
WORKS OF

Sir Charles Bell
Sir J. Y. Simpson
Professor Syme
Professor Hughes Bennett
Professor Miller
Professor Spence
Professor John Goodsir
Professor J. H. Balfour
Sir George Ballingall
Sir R. Christison
Sir William Turner, etc.

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EDINBURGH MEDICINE OF SEVENTY YEARS AGO

THE time about the year 1845 was a remarkable era in medicine. Thirty years had passed since Waterloo, and in this interval of general European peace the arts and sciences had found opportunity to develop, and many momentous discoveries were taking place. At Edinburgh, during this period, Chairs in Chemistry and Pathology had been inaugurated, and the subjects of surgery, physiology, *materia medica*, and forensic medicine had ceased to be mere appanages of, or stepping-stones to, the older Chairs of Anatomy and Medicine.

In 1845 Alexander Monro (*tertius*) had become utterly unfit for the duties of the Anatomical Chair, which he had held since 1798, and which, having been occupied by himself, his father, and his grandfather for a century and a quarter, had come to be regarded as a kind of antiquated heirloom of the Monro family. In the following year he was succeeded by John Goodsir, a strenuous and successful lecturer in the fields of medical science and medical philosophy.



PROFESSOR MONRO.

(From "Modern Athenians";
A. and C. Black.)

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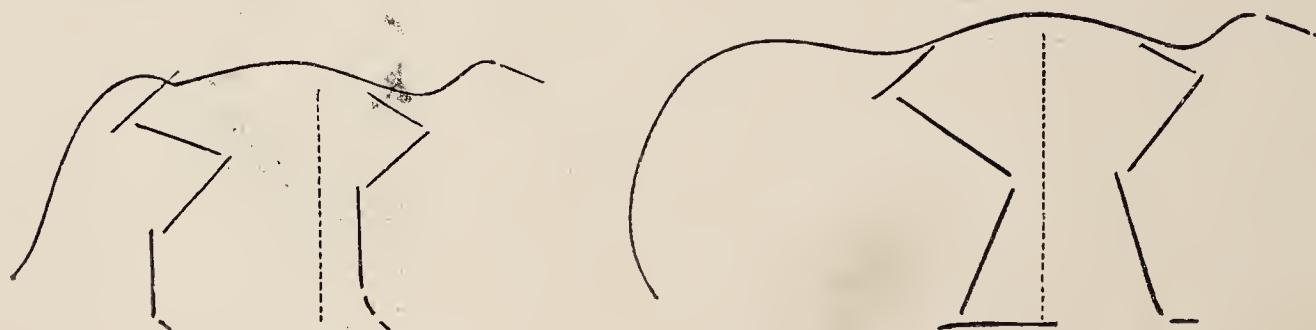
In the year of his professorial appointment Goodsir published researches upon the cause of the potato blight, which brought

famine to Great Britain and Ireland in the years 1845-47. This he was the first to attribute to the growth of a fungus, at that time a new conception in biology, although the germ-theory of contagion had been introduced by Fracastor in the sixteenth century and generally accepted. In 1842 Goodsir had also discovered the *Sarcina ventriculi* as the cause of the symptoms that accompany dilated stomach, and these researches prepared the way for the more precise experimental investigations of

JOHN GOODSR.

(From "Anatomical Memoirs," ed.
by W. Turner.)

Pasteur and Lister a score of years later. Goodsir's lectures on the dignity of the human body, his numerous contributions to comparative and human anatomy, and his physiological observations, subsequently edited as "Memoirs" for Messrs. A. and C. Black by Sir William Turner, are too well known to require comment.



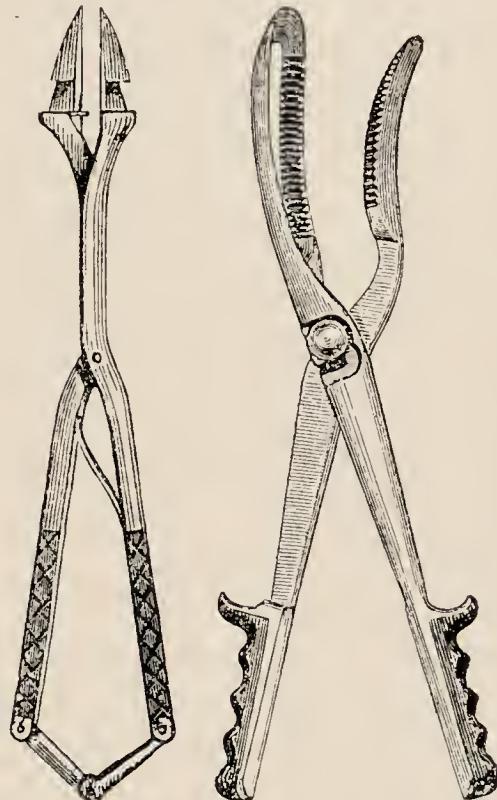
GOODSIR'S OUTLINE DIAGRAMS OF A QUADRUPED AND OF A MONKEY
(*Op. cit.*)

One of the best-known names in the medical world of 1845 was that of Sir James Young Simpson, a man of unquenchable

energy in practice, of fertile resource in new discoveries, and of cultivated knowledge regarding the past history of his profession. Simpson made a wide and lasting reputation in many fields. As an illustration of the popularity which attracted to him a practice almost unsought, we may quote a description which his colleague, Sir Robert Christison, gives of a call made by him on Simpson with reference to a business matter (an intended exploitation for commercial purposes of the newly discovered "paraffin"). Christison writes :

"Simpson was at this period in the full swing of his marvellous practice. When I called on him, his two reception-rooms were, as usual, full of patients, more were seated in the lobby, female faces stared from all the windows in vacant expectation, and a lady was ringing the door-bell. But the Doctor brushed through the crowd to join me, and left them all kicking their heels at their leisure for the next two hours. . . ."

At the time of which we write, Simpson had been five years incumbent of the Midwifery Chair, and was busily engaged in the search after an anæsthetic suited for obstetric use, which he gave to the world as chloroform two years later, in 1847. We may transcribe his own account of the steps in the discovery of anæsthetics, for which a great deal of the credit belongs to Edinburgh, and which, side by side with Lister's antiseptic principles, has revolutionized surgical practice:



PERFORATOR AND CRANIOCLAST INTRODUCED BY SIR J. Y. SIMPSON.

(From "Clinical Lectures on Diseases of Women.")

"If we try to put into a summarized form the data which we have been discussing regarding the introduction of anæsthesia in America and this country, it appears to me that we might correctly state the whole matter as follows:

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“ 1. That on the 11th December, 1844, Dr. Wells had at Hartford, by his own desire and suggestion, one of his upper molar teeth extracted without any pain, in consequence of his having deeply breathed nitrous oxide gas for the purpose, as suggested nearly half a century before by Sir Humphry Davy.

“ 2. That after having with others proved, in a limited series of cases, the anaesthetic powers of nitrous oxide gas, Dr. Wells proceeded to Boston to lay his discovery before the Medical School and Hospital there, but was unsuccessful in the single attempt which he made, in consequence of the gas-bag being removed too soon, and that he was hooted away by his audience, as if the whole matter were an imposition, and was totally discouraged.

“ 3. That Dr. Wells’s former pupil and partner, Dr. Morton of Boston, was present with Dr. Wells when he made his experiments there.

“ 4. That on the 30th September, 1846, Dr. Morton extracted a tooth without any pain, whilst the patient was breathing sulphuric ether, this fact and discovery of itself making a NEW ERA in anaesthetics and in surgery.

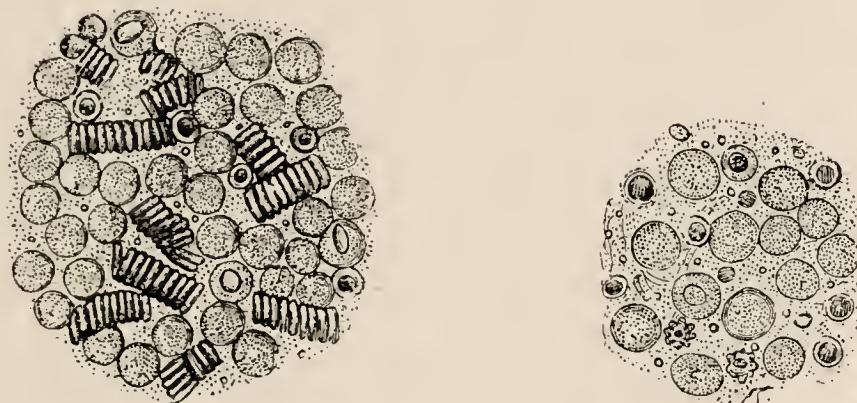
“ 5. That within a few weeks the vapour of sulphuric ether was tried in a number of instances of surgical operations in Boston—Dr. Morton being generally the administrator—and ether vapour was established as a successful anaesthetic in dentistry and surgery.

“ 6. That in January, and the subsequent spring months, 1847, the application of sulphuric ether as an anaesthetic in midwifery was introduced, described in our medical journals, and fully established in Edinburgh, before any case with it was tried in Boston or America.

“ 7. That on the 15th November, 1847, the anaesthetic effects of chloroform were discovered in Edinburgh, and that it swiftly superseded in Scotland and elsewhere the use of sulphuric ether, and extended rapidly and greatly the practice of anaesthesia in surgery, midwifery, etc.”

The last-mentioned discovery was made entirely by Simpson with his assistants, Keith and Matthews Duncan. As an example of Simpson’s resource in treatment and historical knowledge, we may quote from his “ Diseases of Women,” edited for Messrs. Black by his successor in the Midwifery Chair, Sir Alexander Simpson, the following extract:

"But I may as well warn you that, should any of you imagine that he has made a discovery of something practical in medicine, if he will take the trouble carefully to look over the works of Hippocrates, or Galen, or Paul of *Ægina*, or of some other ancient medical writer, he will very probably get all the glory taken out of him. When the ancient Greek and Roman physicians burnt various herbs, the fumes from which were conducted by a tube to the os uteri in cases of uterine pains, ulcers, etc., they in reality applied carbonic acid gas. In Germany, the waters of some of the baths, such as those of Marienbad and Nauheim, have long been used as local sedatives to the uterus, and these waters contain always a proportion of free carbonic acid. . . ."



BLOOD-FILMS FROM THE FIRST TWO CASES OF LEUCOCYTHÆMIA (SPLENO-MEDULLARY) RECORDED BY HUGHES BENNETT.

(From "Clinical Lectures.")

An important discovery, made in the year 1845 by John Hughes Bennett, Professor of Physiology at Edinburgh, was that of a disease which he called "leucocythaemia" (white-cell blood). By a curious coincidence, Virchow recorded this disease independently at Berlin six weeks later, and applied to it the name of "leukhæmia" (white blood)—an illustration of the fact that discoveries in medicine are often made simultaneously by several investigators. Bennett's important textbooks on Medicine and Clinical Medicine were published by Messrs. A. and C. Black, and for many years enjoyed a worldwide popularity.

In 1845 Professor Balfour was appointed to the Chair of Botany. His "Textbook of Practical Botany," etc., were published by Messrs. A. and C. Black, and it is interesting to make an

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extract which shows the general knowledge of the time regarding the cause of septic changes and their remedy prior to the celebrated work which Lister subsequently carried out in Edinburgh:

"The disease, which has recently attacked the potato in various parts of the world, is by many attributed to the attack of fungi. This view has been strongly advocated by Berkeley. . . . He states that the disease commences in the leaves. They were attacked by the mould, which ran its course in a few hours, and from the rapidity of the action the period for examination of the leaves was often passed over. The fungus generated does not live on decayed or decaying matter, but is one which produces decay and renders the plants unhealthy. . . .

"Timber, after being cut, has been subjected to various processes for the purposes of rendering it durable. Kyanizing is performed by subjecting the wood to the action of corrosive sublimate, by means of which it is probable that the albuminous matter is coagulated, fermentation is prevented, and hence the wood is rendered less liable to decay and to the attacks of fungi. Kyan's solution is made to pass rapidly through wood *in vacuo*. Sir William Burnett found that the application of chloride of zinc to vegetable matters, such as wood and canvas, had the property of effectually guarding them against all the ordinary causes of destruction, without communicating any bad property to the substance prepared from it."

While the dignified and gifted Sir Robert Christison held the Chair of Forensic Medicine, he prepared for Messrs. A. and C. Black a "Treatise on Poisons," the fourth edition of which was published in 1845. Christison was one of the earliest and most assiduous workers in the modern subject of toxicology, and, in association with Sir W. Newbigging, he was responsible for making the important researches dealing with the questions of bruises inflicted before and after death, and of the signs in death from asphyxia, regarding the case of the notorious murderers, Burke and Hare. These famous researches in the year 1828 had enabled the Crown to fasten upon the murderers the responsibility for a series of crimes which had been carried out

by the method of intoxicating their victims, who were then simply stifled by a hand placed over the mouth and nose. On his transference to the Chair of Materia Medica, Christison wrote for Messrs. Black a "Dispensatory," a sort of commentary on the various pharmacopœias of the United Kingdom. The second edition was produced with the help of Dr. (later Sir) Douglas Maclagan, then extra-mural Lecturer on Materia Medica, and subsequently a distinguished Professor of the University. The following quotation illustrates his style, and deals with a subject which had been amplified through Christison's own research:

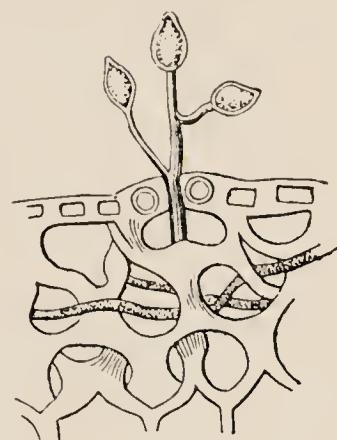
"CONII FRUCTUS.

"It is not clearly ascertained at what time hemlock was introduced into the *materia medica*. Doubts exist whether the ancient *κώνιον* was the modern hemlock. The description of Dioscorides does not apply to the *Conium maculatum* of botanists. But the action of this plant as a poison, ascertained only in recent times, corresponds closely with the description given by Nicander and Plato of the *κώνιον* or State poison of the Greeks. Hemlock was little used in modern physic till Störck revived it in 1762 as a remedy for cancerous diseases and glandular swellings.

"Conia, the alkaloid of hemlock, has not yet been used as a medicine, but it is a most energetic poison, possessing the same remarkable action on the spinal chord as hemlock itself."

Professor Traill, who in 1832 succeeded Christison in the Chair of Forensic Medicine, also wrote a textbook on this subject for Messrs. A. and C. Black.

In surgery, the year 1845 stands midway between the time in 1835 when Robert Liston, having obtained a European reputation for his skill in operating as an Edinburgh extra-mural lecturer, migrated to London, and the time when, in 1855, Joseph Lister, a young London graduate, took up his



FUNGUS WHICH OCCURS ON
DISEASED LEAVES OF
POTATOES.

(From Balfour's "Class Book of Botany.")

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work as assistant to Syme, and as a lecturer in Edinburgh. Syme's pioneer work in the excision of diseased joints is only less well known than the introduction of antiseptic surgery by this earnest young Quaker, who became his son-in-law, and who succeeded him as Professor of Clinical Surgery in 1869.

Sir Charles Bell had been a lecturer at Edinburgh in early life, then he had been a surgeon at the Middlesex Hospital,

amplifying his income by receiving resident students into his house in London; finally, he returned to Edinburgh, where he held the Chair of Surgery from 1836 to 1842. Bell, though in life he enjoyed only moderate success, either as a teacher or as a consultant, has left behind him one of the greatest reputations in British medicine as a surgeon, physiologist, artist, and man of culture. Various works—*e.g.*, his “Institutes of Surgery”, and his “Nervous System of the Human Body”—were published by Messrs. A. and C. Black, and his works possess the distinction of having been illustrated by his own brush and pencil, which gives to them

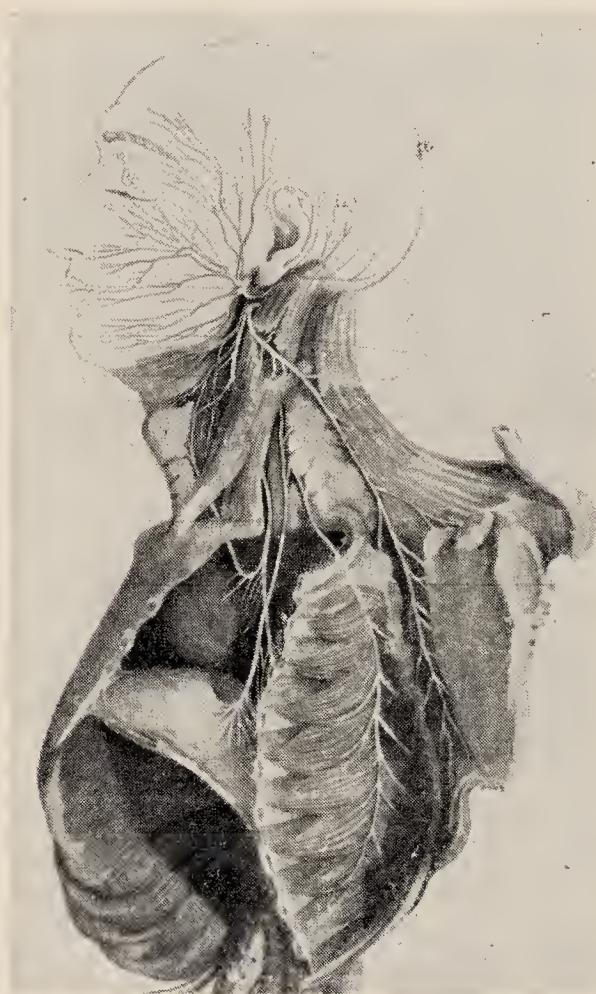


PLATE SHOWING THE GROUP OF
“RESPIRATORY NERVES.”

(Drawn by C. Bell for his “Nervous System.”)

a double value. He was followed in the Chair of Surgery by Professor James Miller, and he in turn by Professor James Spence, both of whom wrote textbooks on surgery for Messrs. Black. The following quotation from Bell's “Institutes of Surgery” illustrates how new to surgery the operation for excision of a joint still was, even at the end of his life:

“One more important discussion remains under this section. It regards the excision of diseased joints. The idea was suggested by

Mr. Park, of Liverpool, in the last age. He cut off the diseased surfaces in white swelling of the knee—a very bold operation. This operation, I believe, is not now executed. However, we have seen that the head of the humerus may be taken away with the surface of the glenoid cavity of the scapula. The excision of the heads of bones entering into the elbow-joint is an operation frequently performed. Mr. Arnott, my colleague in the Middlesex Hospital, patronized this operation, and several times performed it. I do not object to it when there is a portion of exfoliating bone, but I do when there is only disease of the synovial membrane and cartilages and sinuses around the joint, for such a case is to be cured by ankylosis. . . . Professor Syme has successfully practised the excision of the ends of the bones, and has published on the subject."

The following passage, quoted from Sir Charles Bell's "Nervous System of the Human Body" (p. 443), published by Messrs. A. and C. Black (1836), describes Bell's celebrated discovery of the function of the spinal nerve roots which had been ascertained previously by him:

"On laying bare the roots of the spinal nerves, I found that I could cut across the posterior fasciculus of nerves, which took its origin from the posterior portion of the spinal marrow, without convulsing the muscles of the back; but that, on touching the anterior fasciculus with the point of the knife, the muscles of the back were immediately convulsed."

In the same book are given Bell's famous researches upon the nerves of the face and respiration. The following (p. 57) gives the first account of effects produced by paralysis of the seventh nerve (*Bell's palsy*):

"It appears that whenever the action of any of the muscles of the face is associated with the act of breathing, it is performed through the operation of this respiratory nerve, or *portio dura*. I cut a tumour from before the ear of a coachman. A branch of the nerve which goes to the angle of the mouth was divided. Some time after he returned to thank me for ridding him of a formidable disease, but complained that he could not whistle to his horses."

As an illustration of the fear which surgeons entertained to operate upon the abdomen prior to the advent of the system which Lister laboured to introduce, we may quote a paragraph from the "Textbook of Military Surgery," published by Messrs.

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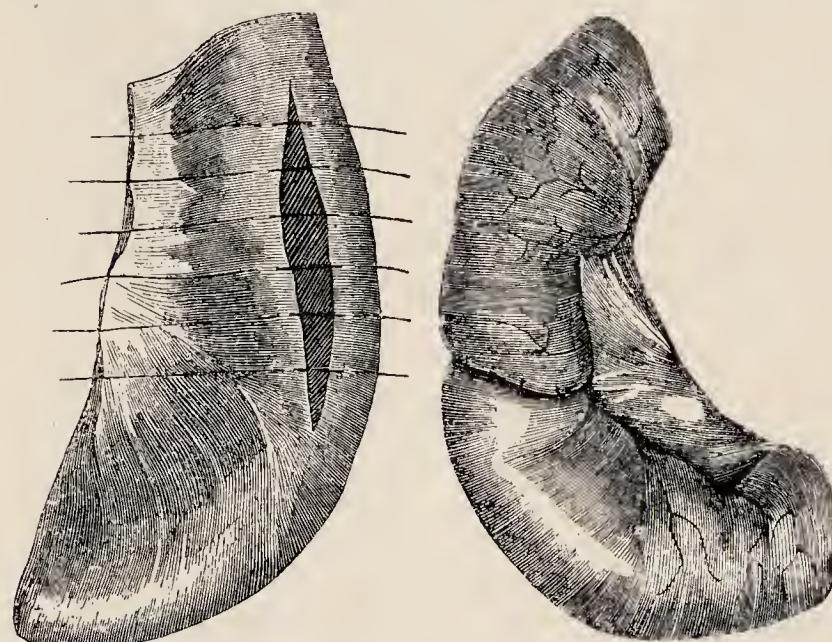
A. and C. Black for Sir George Ballingall, who held the Chair on this subject at Edinburgh from 1823 till it was abolished at his death in 1855:

"Wounds of the small intestines are, for the most part, either primarily or secondarily fatal, while those of the large intestines sometimes heal without difficulty. This fact has not escaped the notice of the older writers, for they pronounced wounds of the latter dangerous in the highest degree; those of the former, without exception, fatal. . . . No man in his senses would think of enlarging the external wound for the purpose of searching out and sewing up the wounded part of the gut—a practice the propriety of which is not universally admitted even when the wounded intestine protrudes externally. Extravasation of the contents of the bowels within the peritonæum is by no means so liable to occur as speculative writers would lead us to imagine, and, when it does happen to any extent, the case may for the most part be abandoned as hopeless. . . .

"It must ever be recollect ed that bleeding from the arm is the best preservative from internal bleeding and peritoneal inflammation—the two great sources of danger in wounds of the abdomen. . . ."

Other well-known Edinburgh Professors of this period were Allen Thomson, the pioneer in embryology, who held the Chair

of Physiology from 1842 to 1848; W. Pulteney Alison, Professor of Medicine from 1842 to 1855; William Henderson, who became the second Professor of Pathology in 1842, and was subsequently alone of all those who have held Chairs in Edinburgh, and to the great disapprobation of his col-



LEMBERT'S "NEW MODE" OF SEWING UP THE INTESTINE.

(Described by Ballingall in his "Outlines of Military Surgery.")

leagues, a devoted adherent of the homœopathic system; and William Gregory, who became Chemistry Professor in 1844.

NOTE

The beginning of the Edinburgh Medical School dates back to the early years of the eighteenth century, when it numbered among its professors the distinguished names of Alexander Monro, Cullen, Gregory, Whytt, and Joseph Black. In the earlier part of the nineteenth century the fame of this teaching centre was increased by Sir Charles Bell, Sir Robert Christison, Sir J. Y. Simpson, Robert Liston, Hughes Bennett, Goodsir, Syme, and Lister; and at the present day we may confidently say that its lamp of learning is no less bright than throughout this illustrious past.

It is natural, therefore, to look to Edinburgh for outstanding and up-to-date books, so with a view to forming an “Edinburgh Medical Series” Messrs. A. and C. Black have arranged with several of the younger graduates and teachers of this University for the preparation of manuals and textbooks dealing with the subjects to which they have devoted special attention.

(SEE OVERLEAF.)

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